AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning on page 1, line 3, and ending on page 1, line 5, with the following amended paragraph:

The invention relates to a non-destructive method of detecting and quantifying subsurface defects in an article after brazing ~~according to the independent claim~~.

Please replace the paragraph beginning on page 1, line 7, and ending on page 1, last line, with the following amended paragraph:

The wide use of single crystal (SX) and directionally solidified (DS) components allows an increased turbine inlet temperature and therefore an increased turbine efficiency as well. Alloys, specially designed for SX/DS casting, were developed in order to make maximum use of material strength and temperature capability. During operation of such components under high temperature conditions, various types of damages can occur. For example, cracks can result from thermal cycling and foreign object impact. In addition, cracks and inclusions ~~my~~ may be incurred during manufacture. Because the cost of the components formed from high temperature nickel base superalloys is relatively high, it is usually more desirable to repair these components than to replace them.

Please replace the paragraph beginning on page 2, line 3, and ending on page 2, line 9, with the following amended paragraph:

~~US~~ U.S. Patent No. 5,732,467 discloses a method of repairing cracks on the outermost surface of an article having a directionally oriented microstructure and a

superalloy composition. The repairing is done by coating the cleaned crack surface with a material featuring the same material composition as ~~said~~ the article. Thereby the coated crack surface is subjected to an elevated temperature and isostatic pressure over a period of time sufficient to repair the crack surface without changing the crystalline microstructure of the parent article.

Please replace the paragraph beginning on page 2, line 10, and ending on page 2, line 16, with the following amended paragraph:

In addition, a number of alternative methods of brazing for repairing cracks or gaps are known. ~~US-5,666,643~~ U.S. Patent No. 5,666,643 discloses a braze material for repairing an article, in particular components made from a cobalt and a nickel-base superalloy, such as gas turbine engine parts. The braze material is composed of particles featuring a high melting temperature which are distributed within the ~~a~~ braze alloy. These particles could be of single crystal, directionally solidified, or equiaxed microstructure.

Please replace the paragraph beginning on page 2, line 17, and ending on page 2, line 25, with the following amended paragraph:

Existing NDE-techniques have limited capabilities to quantitatively ~~characterise~~ characterize any remaining subsurface brazing defect ~~or~~ in complex geometries like gas turbine blades and vanes. Especially, Eddy Current techniques of prior art can not be applied on geometries with locally changing wall thickness in the range of the penetration depth of the eddy current sensor. They are not able to

give quantitative information on defect size and in-depth location in varying geometries as Burke, S. K, G., 2001, "Crack depth measurement using Eddy Current NDE", presented at Destructive Testing, Sep. 17-21, 2001, Brisbane, AUS discloses.

Please replace the paragraph beginning on page 2, line 27, and ending on page 3, line 2, with the following amended paragraph:

It is the aim of the present invention to find a non destructive testing method for the quality control of high temperature brazed cracks or gaps made of article made of high strength non magnetisable materials such as blades or vanes of gas turbines made from a ~~Nickel~~ nickel base superalloy.

Please replace the paragraph beginning on page 3, line 21, and ending on page 3, line 22, with the following amended paragraph:

In one embodiment of the present invention, the method is applied to blades or vanes of gas turbines from a ~~Nickel~~ nickel base superalloy.

Please replace the paragraph beginning on page 4, line 7, and ending on page 4, line 15, with the following amended paragraph:

The invention relates to a method for the quality control of brazed cracks or gaps in a single crystal article 1 made of a Nickel base superalloy. Nickel base superalloys are known in the state of the art, e.g. from the document ~~US~~ U.S. Patent No. 5,888,451, ~~US~~ U.S. Patent No. 5,759,301 or from ~~US~~ U.S. Patent No. 4,643,782, which is known as "CMSX-4". As an example, FIG. 1 shows an article 1 such as blades or vanes of gas turbine engines, the gas turbine blade comprising a root

portion 2, a platform 3 and a blade 4 with an internal cavity 5, not shown in FIG. 1, and cooling holes 6. The component 1 exhibits cracks 8 and gaps somewhere on an external surface 7 after being exposed to the hot gases of the gas turbine.

Please replace the paragraph beginning on page 4, line 16, and ending on page 5, line 5, with the following amended paragraph:

As shown in detail and in way of an example in FIG. 2, the external surface 7 of the component 1 exhibits a crack 8 which has to be repaired. As a preparation before applying the method of brazing, a protective coating such as MCrAlY or thermal barrier coating (TBC), has to be removed by a process of acid stripping, grit blasting or mechanical grinding. At the same time this method also cleans the surface layer of the parent material from unwanted oxides, debris, corrosion products or other contaminants. In addition, the surface of the crack or gap may be cleaned from oxides by using any means known in the state of the art such as Floride Ion Cleaning (FIC), other halide cleaning, hydrogen cleaning, salt bath cleaning, any combination thereof or other means, which is widely known in state of the art. The FIC process removes the stable Al_2O_3 oxides and depletes Al from the surface, thereby improving the braze flow and the repair of the cracked components. The process subjects the oxidized (and sulphidized) components to a highly reducing gaseous atmosphere of hydrogen and hydrogen fluoride at high temperatures, which may vary from 900°C to 1000°C. Such FIC-processes are disclosed, for example, in EP-B1-34041, ~~US-4,188,237~~ U.S. Patent No. 4,188,237, ~~US-5,728,227~~ U.S. Patent No. 5,728,227 or in ~~US-5,071,486~~ U.S. Patent No. 5,071,486. After successful

completion of the brazing method according the invention, the component will be recoated.

Please replace the paragraph beginning on page 5, line 6, and ending on page 5, line 15, with the following amended paragraph:

The crack 8 is subsequently repaired by any kind of brazing known from the state of the art and using an appropriate brazing filler material 9. The result is shown in FIG. 3. In a length L the crack 8 is repaired by the brazing operation in an adequate manner and the brazing material 9 filled the crack 8 properly, whereas other locations shows braze defects or subsurface cracks 10. The remaining subsurface crack 10 has a depth of x. It may be that any kind of other subsurface braze defect 10 ~~occur~~ occurs during the brazing operation. Thus, the remaining subsurface cracks or braze defects 10, which were not properly filled with braze material 9 during the repair operation, will be detected ~~an~~ and quantified by any means of a multifrequency scanning eddy current system.

Please replace the paragraph beginning on page 6, line 16, and ending on page 6, line 26, with the following amended paragraph:

In the present invention, after the brazing operation the brazed areas are inspected on a grid of points by an eddy current probe connected to a frequency scanning eddy current system. The signal obtained from the system at each inspected point is analysed by means of an algorithm which fits the ~~said~~ signal with a calculated signal obtained from a simple model of the interaction between the probe and a multiple layer material, each layer of which is plane, homogeneous, and

~~characterised~~ characterized by a value of electrical conductivity and positions of the interface with the adjacent layers. The effect on the signal due to presence of a subsurface ~~defects~~ defect 10 is approximated by a reduction of the electrical conductivity in a layer corresponding to the position of the subsurface ~~defects~~ defect 10 in the thickness of the material.

Please replace the paragraph beginning on page 7, line 15, and ending on page 7, line 16, with the following amended paragraph:

Typical geometries of cracks for an application of the present invention are shown in Fig. 3 and Fig. 4.